

What is claimed is:

1. A breakaway connector, comprising:
first connecting means for connecting with an external device; and
second connecting means for maintaining a length of rope in a bent state and for holding the rope until a load applied to the rope reaches a predetermined level at which said second connecting means completely release the rope, said second connecting means comprising a breakaway element that will fail under said load of said predetermined level to release the rope.
2. The breakaway connector of claim 1, wherein a material failure load of said breakaway element is from about 500 to about 600 lbs.
3. The breakaway connector of claim 1, wherein a material failure load of said connector is minimal at said breakaway element.
4. The breakaway connector of claim 1, wherein said second connecting means further comprise guiding means for guiding the rope around said breakaway element to define a bent section of the rope at said breakaway element and first and second sections of the rope on opposite sides of the bent section.
5. The breakaway connector of claim 4, wherein said guiding means comprise a passage and said breakaway element is positioned in said passage to divide said passage into first and second channels for accommodating the first and second sections of the rope, respectively.
6. A breakaway connector, comprising
a body having a through hole; and
a web extending transversely of said through hole and dividing said through hole into first and second channels;

wherein a material failure load of said web is smaller than a material failure load of said body.

7. The breakaway connector of claim 6, wherein said web is an integral part of said body and does not extend for a full axial extent of said through hole.

8. The breakaway connector of claim 6, wherein said web has a notch extending axially of said through hole, said notch being positioned in a central region of said web for accommodating, at least partially, a bent section of a rope being inserted in the first and second channels to pass around said web.

9. The breakaway connector of claim 6, wherein said web connects opposite inner walls of said through hole, said web having indentations located adjacent to said opposite inner walls.

10. The breakaway connector of claim 6, wherein said through hole includes, in an axial direction thereof, first and second sections angled with respect to each other, said web being positioned within said first section.

11. The breakaway connector of claim 10, wherein the angle between said first and second sections is from about 30 to about 60 degrees.

12. The breakaway connector of claim 6, wherein said body defines an eye for connection to an external device.

13. The breakaway connector of claim 6, wherein
said body is a ring-shaped body that extends circumferentially for less than 360 degrees and has first and second end portions circumferentially spaced from each other;
said ring-shaped body defines a loop for connection to an external device; and
a spacing between said spaced first and second end portions defines a slot extending from an outer circumferential surface of said body into said loop.

14. The breakaway connector of claim 13, wherein said through hole includes first and second sections formed in said first and second end portions, respectively, said web being positioned within one of said first and second sections of said through hole.

15. The breakaway connector of claim 14, wherein said first and second sections of said through hole are at least partially aligned.

16. The breakaway connector of claim 15, wherein said first and second sections of said through hole are straight sections that are angled with respect to each other.

17. The breakaway connector of claim 14, wherein said first and second sections of said through hole extend transversely of said slot without directly opening into said loop.

18. The breakaway connector of claim 14, wherein said first and second sections of said through hole directly open onto said loop and said slot.

19. The breakaway connector of claim 13, wherein said through hole comprises first and second sections extending generally in parallel with said slot and directly opening onto said loop, said web being defined by a wall that separates one of said first and second sections of the through hole from said slot.

20. A breakaway connection, comprising a rope and a breakaway connector, wherein

said breakaway connector comprises a body having a passage for the rope and a transverse web positioned in said passage;

a length of said rope being received in said passage includes first and second sections on opposite sides of said web and a bent section which connects said first and second sections and comes to rest on said web when one of the first and second sections of said rope is pulled; and

said web defines a weakened region of said breakaway connector which will fail to completely release the rope from said breakaway connector when a load applied to said web via said bent section of said rope reaches a predetermined level.

21. The connection of claim 20, wherein friction between the first and second sections of said rope and at least one of said passage and said web is sufficient to hold said rope against slipping within said passage until said weakened region fails.

22. The connection of claim 20, wherein said rope includes a weakened portion which has a material failure load smaller than that of the weakened region of said breakaway connector, so that said rope breaks before said weakened region.

23. The connection of claim 22, wherein said bent section of said rope includes said weakened portion.

24. The connection of claim 20, wherein said passage includes
a first section in which said web is positioned and which is divided by said web into two channels each accommodating one of said first and second sections of said rope; and
a second section free of said web so that said first and second sections of said rope are allowed to physically contact each other in said second section of said passage.

25. The connection of claim 24, wherein inner walls of said first and second sections of said passage are aligned to facilitate insertion of said rope between said first and second sections of said passage.

26. The connection of claim 20, further comprising underwater gear connected to an end portion of said first section of said rope, an end portion of said second section of said rope being left free without being tied up into a knot or a noose, so that said end portion of said second section of said rope can pass through said passage to release said rope from said breakaway connector.

27. The connection of claim 20, further comprising underwater gear connected to an end portion of said first section of said rope, an end portion of said second section of said rope being tied up into a knot which must be untied before said end portion of said second section of said rope can pass through said passage to release said rope from said breakaway connector.

28. The connection of claim 20, further comprising underwater gear connected to an end portion of said first section of said rope,

wherein, when said first section of said rope is pulled towards the underwater gear, said first section of said rope presses said second section of said rope against a wall of said breakaway connector, thereby preventing the second section of said rope from slipping within said passage.

29. The connection of claim 20, further comprising a swivel, said body further comprising a connecting portion connected with said swivel.

30. The connection of claim 20, wherein
said body is a ring-shaped body that extends circumferentially for less than 360 degrees and has first and second end portions normally circumferentially spaced from each other;

said ring-shaped body defines a loop for connection to an external member;

a spacing between said spaced first and second end portions is increasable, by virtue of a flexibility of said body, to facilitate movement of a wall of the external member through said spacing before the rope is attached to said breakaway connector; and

said rope being attached to said breakaway connector crosses said spacing and prevents the external member from being disconnected from said loop.

31. The connection of claim 30, further comprising said external member which includes a swivel.

32. A method of establishing a breakaway connection in a fishing line, comprising the steps of:

connecting one end of a rope to underwater gear; and
attaching an opposite end of said rope to a breakaway connector without using or having to form a noose or a closed loop in the opposite end of said rope.

33. The method of claim 32, wherein said attaching comprises
inserting the opposite end of said rope through a passage of said breakaway connector, on one side of a breakaway element disposed in said passage, said breakaway element defining a weakened region of said breakaway connector which will fail to completely release the rope from said breakaway connector when a load applied to said breakaway element via said rope reaches a predetermined level; and

passing back the opposite end of said rope through said passage, on an opposite side of the breakaway element.